

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An agitating retort, comprising:
 - (a) a substantially closed shell structure;
 - (b) a drum assembly rotatable within the shell structure, said drum assembly being centrally substantially hollow to receive ~~closed~~ containers of food products therein for processing the food products within the ~~closed~~ containers within the agitating retort;
 - (c) a process fluid distribution system positioned within the interior of the drum assembly to distribute processing fluid within the drum assembly, said processing fluid distribution system configured and positioned to cause process fluid to flow over the food product containers; and[,]
 - (d) a rotary coupling disposed within the shell structure and exterior to the interior of the drum assembly, the rotary coupling further in fluid flow communication with the distribution system to direct processing fluid from the exterior of the drum assembly to the distribution system within the drum assembly during rotation of the drum assembly within the shell.
2. (Original) An agitating retort according to Claim 1, wherein the drum assembly includes a hub sub-assembly coupled to one end portion of the drum assembly, said rotary coupling integrated into the hub sub-assembly.
3. (Original) The agitating retort according to Claim 2, wherein the hub sub-assembly is rotatable by a torque source supplied to the hub sub-assembly, thereby to rotate the drum assembly within the shell structure.
4. (Canceled)

5. (Original) An agitating retort according to Claim 2, wherein said rotary coupling comprising portions defining a fluid receiving annulus in fluid flow communication with a source of processing fluid and in fluid flow communication with a processing fluid distribution system.

6. (Original) An agitating retort according to Claim 5, wherein the fluid-receiving annulus is built into the hub sub-assembly.

7. (Original) An agitating retort according to Claim 5, wherein said hub sub-assembly further comprising a distribution manifold in fluid flow communication with the fluid receiving annulus and in fluid flow communication with the process fluid distribution system.

8. (Original) An agitating retort according to Claim 7, wherein said distribution manifold is integrated into the hub sub-assembly.

9. (Original) An agitating retort according to Claim 8, wherein said distribution manifold comprising a plurality of processing fluid passageways extending from the fluid receiving annulus to the distribution system.

10. (Original) An agitating retort according to Claim 9, wherein such passageways have outlets leading to the distribution lines that extend transversely from the hub sub-assembly;

11. (Original) An agitating retort according to Claim 7, further comprises a flow controller operable within said distribution manifold to block or restrict flow of processing fluid to portions of the distribution system.

12. (Original) An agitating retort according to Claim 11, wherein portions of the distribution system restricted or blocked by the flow controller depend on the rotational direction of the drum.

13. (Original) An agitating retort according to Claim 5, further comprising a flow controller disposed between the fluid receiving annulus and the distribution system to selectively restrict or block flow of processing fluid to portions of the distribution system.

14. (Original) An agitating retort according to Claim 13, wherein restricting or blocking of the processing fluid to specific portions of the distribution system depends on the rotational direction of the drum.

15. (Original) An agitating retort according to Claim 14, wherein said flow controller is located within the fluid receiving annulus.

16. (Previously presented) An agitating retort, comprising:

- (a) a shell structure;
- (b) a drum assembly rotatable within the shell structure, said drum assembly adapted to receive containers of products to be processed within the agitating retort;
- (c) a process fluid distribution system positioned within the interior of the drum assembly to distribute processing fluid within the drum assembly;
- (d) a rotary coupling disposed within the shell structure and exterior to the interior of the drum assembly, the rotary coupling further in fluid flow communication with the distribution system to direct processing fluid from the exterior of the drum assembly to the distribution system within the drum assembly during rotation of the drum assembly within the shell;

(e) wherein the drum assembly includes a hub sub-assembly coupled to one end portion of the drum assembly, said rotary coupling integrated into the hub sub-assembly;

(f) wherein said rotary coupling comprising portions defining a fluid receiving annulus in fluid flow communication with a source of processing fluid and in fluid flow communication with a processing fluid distribution system, said fluid receiving annulus comprises a groove formed in the hub sub-assembly, said groove being open in the radial direction relative to the hub sub-assembly; and

(g) wherein said rotary coupling further comprising:

a collar closely engaged over said groove;

a seal arrangement disposed between said collar and said groove, said seal permitting relative rotation between the collar and said groove while restricting passage of processing fluid between the collar and said groove; and

a processing fluid receiving inlet, located in said collar in communication with the groove.

17. (Original) An agitating retort according to Claim 16, wherein the seal arrangement comprises a seal ring positioned between each side of said groove and said collar, and a seal positioned between each of said rings and the underside of said collar.

18. (Original) An agitating retort according to Claim 17, further comprising a reaction mechanism for restricting the rotation of the collar with the rotation of the hub sub-assembly, said reaction mechanism coupled to the shell structure by a coupling system.

19. (Original) An agitating retort according to Claim 18, wherein said coupling system comprising an arm extending from said collar, said arm coupled to said shell structure.

20. (Original) An agitating retort according to Claim 16, further comprising a processing fluid supply line in communication with the collar inlet.

21. (Original) An agitating retort according to Claim 20, further comprising a flexible coupling interposed between the processing fluid supply line and the collar inlet.

22. (Original) An agitating retort according to Claim 1, further comprising a flow controller cooperative with said rotary coupling to selectively restrict or block flow of processing fluid to specific distribution lines of the processing fluid distribution system.

23. (Original) An agitating retort according to Claim 22, wherein the specific lines of the processing fluid distribution system that are restricted or blocked depend upon the direction of rotation of the drum.

24. (Original) An agitating retort according to Claim 1, further comprising a distribution manifold in fluid flow communication with the rotary coupling and in fluid flow communication with the fluid distribution system.

25. (Original) An agitating retort according to Claim 24, wherein said distribution manifold is integrated into the rotary coupling.

26. (Original) An agitating retort according to Claim 1, wherein the process fluid distribution system comprises a plurality of distribution lines disposed within the drum.

27. (Previously presented) In an agitating retort having a shell structure and a drum assembly rotatable within the shell structure, the drum assembly configured to receive products to be processed within the agitating retort, an improved process fluid distribution system comprising:

a plurality of process fluid distribution outlets disposable within a drum assembly and thereby carryable by a drum assembly, said distribution outlets configured and positioned to apply process fluid over products receivable within a drum assembly; and

a rotary coupling disposable within a shell structure and exterior to an interior of a drum assembly, said rotary coupling in fluid flow communication with the plurality of process fluid distribution system outlets to direct processing fluid from the exterior of a drum assembly to the plurality of distribution system outlets located within a drum assembly during rotation of a drum assembly, said rotary coupling comprising:

a substantially stationary section for receiving processing fluid from a supply source;

a rotatable fluid receiving section for receiving processing fluid from the stationary section, and directing the process fluid to the plurality of process fluid distribution outlets, said rotatable section rotatable relative to the stationary section; and

a seal arrangement disposed between the stationary section and the rotatable section to control leakage of processing fluid from the rotary coupling.

28. (Previously presented) An improvement according to Claim 27, further comprising at least one process fluid distribution line for interconnecting the rotary coupling with the distribution system outlets disposable within a drum assembly.

29. (Canceled)

30. (Previously presented) An improvement according to Claim 27, wherein the rotatable section of the rotary coupling comprising portions defining a fluid receiving annulus in fluid flow communication with a source of process fluid and in fluid flow communication with said process fluid distribution outlets.

31. (Previously presented) An improvement according to Claim 27, further comprising a hub assembly couplable to one end portion of a drum assembly, the rotary coupling integrated into said hub assembly.

32. (Previously presented) An improvement according to Claim 31, wherein the hub assembly is rotatable by a torque source applied to the hub assembly, thereby to rotate a drum assembly within a shell structure.

33. (Previously presented) An improvement according to Claim 27, further comprising a flow controller to restrict or block the flow of process fluid to selected of said plurality of process fluid distribution outlets.

34. (Currently amended) For an agitating retort having a shell structure and [[a]] an elongate drum assembly rotatable within a shell structure, a process fluid distribution system comprising:

a plurality of process fluid distribution lines disposable within the interior of a drum assembly and extending longitudinally with a drum assembly, at least some of said plurality of distribution lines comprising a plurality of outlets capable of directing process fluid into a drum assembly; and

a rotary coupling disposed exterior to a drum assembly in fluid flow communication with said plurality of distribution lines to direct process fluid to the distribution system lines locatable within the interior of a drum assembly during rotation of a drum assembly, said rotary coupling comprising portions defining a fluid receiving annulus in fluid flow communication with an inlet interconnectable with a source of process fluid, said fluid receiving annulus in fluid flow communication with the plurality of distribution lines, said rotary coupling further comprising a seal arrangement disposed between said inlet and said annulus.

35. (Previously presented) The processing fluid distribution system according to Claim 34, wherein said rotary coupling is locatable within a shell structure.

36. (Canceled)

37. (Previously presented) An agitating retort according to Claim 1, wherein said rotary coupling comprising:

a substantially stationary section for receiving processing fluid from a supply source;

a processing fluid receiving section rotatably coupled with the drum assembly to receive processing fluid from the stationary section and directing the processing fluid to a processing fluid distribution system; and

a seal arrangement disposed between the stationary section and receiving section of the rotary coupling.